The Corps of Discovery II Lewis and Clark commemorative marker designates the symbolic start of a journey and Thomas Jefferson's vision for exploring and mapping America as a young nation. The National Geodetic Survey will place a series of commemorative markers at sites along the Lewis and Clark bicentennial celebration route from Monticello in Virginia to Fort Clatsop in Oregon.

Jefferson's commission of the Corps of Discovery Expedition by Lewis and Clark led to the development of National Spatial Reference System (NSRS). Congress passed an act on February 10, 1807, authorizing Thomas Jefferson to establish an organization to survey America's coasts. Survey of the Coast, the first civilian scientific agency, began establishing permanent markers and coordinates for mapping. Today, the National Geodetic Survey, a part of NOAA's National Ocean Service, carries on the functions of its predecessor.

NSRS is a universally compatible system of geodetic reference points tying our nation together. The safety and efficiency of the buildings we live and work in; the roads and bridges we drive on; and the trains, airplanes, and ships that carry the products we use everyday all depend on NSRS. As a vital part of the nation's infrastructure it provides a foundation for commerce and safe navigation. The Corps of Discovery II Lewis and Clark marker joins over a million reference points realizing Jefferson's vision of connecting the once virtually unknown geography of America.

WE SHALL DELINEATE WITH CORRECTNESS
THE GREAT ARTERIES OF THIS GREAT COUNTRY:
THOSE WHO COME AFTER US
WILL FILL UP THE CANVAS WE BEGIN.

– THOMAS JEFFERSON, 1804

U.S. DEPARTMENT OF COMMERCE • NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

JEFFERSON: THE BEGINNING

Thomas Jefferson, a surveyor, had a vision for a clear delineation of the United States coastline to reduce shipwrecks while expanding commerce and industry. On February 10, 1807, Congress passed an act authorizing Thomas Jefferson to establish an organization to survey the coasts of the United States.

Be it enacted by the Senate and the House of Representatives of the United States of America in Congress assembled, that the President of the United States shall be, and he is hereby authorized and requested, to cause a survey to be taken of the coasts of the United States, in which shall be designated the islands and shoals, with the roads or places of anchorage, within twenty leagues of any part of the shores of the United States; and also the respective courses and distances between the principal capes, or head lands, together with such other matters as he may deem proper for completing an accurate chart of every part of the coasts within the extent aforesaid.

SURVEY OF THE COAST IS BORN

Jefferson created a new bureau called the Survey of the Coast directed by the U.S. Treasury Department. In 1878 the agency was reorganized and given a new name, the Coast and Geodetic Survey (C&GS). The agency focused on the importance of geodesy, the science of measuring the size and shape of the earth, and surveying the nation's coasts.

NATIONAL GEODETIC SURVEY EVOLVES

In 1970, a federal reorganization created the National Oceanic and Atmospheric Administration (NOAA). Under the umbrella of NOAA, part of C&GS became the National Geodetic Survey (NGS). Through time, NGS employees have literally walked from border to border and coast-to-coast, taking vertical and horizontal geodetic surveying measurements. In this fashion, more than a million reference points have been logged to construct the National Spatial Reference System (NSRS) which serves today as the nation's geodetic reference framework.

NGS TODAY

NGS established and maintains NSRS, a national coordinate system available free of charge to the public. NSRS provides the foundation for transportation, communication and defense systems, boundary and property surveys, land records systems, mapping and charting, and a multitude of scientific and engineering applications. The safety and efficiency of the buildings we live and work in, the roads and bridges we drive on, and the trains, airplanes, and ships that carry the products we use everyday all depend this universally compatible system of geodetic reference points that tie our nation together.

NOAA'S NATIONAL GEODETIC SURVEY

www.geodesy.noaa.gov

NATIONAL GEODETIC SURVEY GLOSSARY OF TERMS

Geodesy
The science which determines the shape of the earth and the location of points upon its surface.

Positioning System
A system used for defining the exact geographic location of any object using specific coordinates.

Coordinates
A set of numbers designating the location of a point using latitude and longitude.

Geodetic Control Point
A point at which precise coordinates have been assigned on the earth's surface. These points are commonly used as the beginning and end points of land surveys.

Surveying
Measurement of dimensional relationships, as of horizontal distances, elevation, directions and angles on the earth's surface especially for use in locating property boundaries, construction layout and mapmaking.

Survey Marker/Monument
An object, commonly a brass, bronze, or aluminum disc set in a stable structure, defining the surveyed location of a station.

Receiver
A device for converting electromagnetic radiation into perceptible signals. The term is applied mostly to devices, called radio receivers, for converting radio waves into digital or visual signals.

GPS - Global Positioning System
Developed by the Department of Defense in the 1980s, GPS can determine the location of a position on or far above the earth. GPS is used in air, land, and sea navigation, mapping, surveying, and other applications where precise positioning is necessary.

CORS - Continuously Operating Reference Station
CORS sites make up a nationwide network of Global Positioning System (GPS) receivers.

NSRS - National Spatial Reference System
A system of reference points and precise coordinates that serves mapping, charting, transportation, and other national positioning needs.

Data Sheet
The standard output format from NSRS that describes the location and characteristics of a survey control point.

GIS - Geographic Information System
A computer system for storing, analyzing and displaying data related to positions on the earth's surface. Typically, GIS is used for displaying map data.

NOAA - National Oceanic and Atmospheric Administration
NOAA is dedicated to predicting and protecting the environment. NOAA's overall mission is two-fold: 1) environmental assessment and prediction — to observe and assess the state of our environment, while protecting public safety and the nation's economic and environmental security through accurate forecasting; and 2) environmental stewardship — protect ocean, coastal and living marine resources while assisting their economic development.

NOS - National Ocean Service
NOAA's National Ocean Service (NOS) is dedicated to exploring, understanding, conserving and restoring the nation's coasts and oceans. NOS balances environmental protection with economic prosperity in fulfilling its mission of promoting safe navigation, supporting coastal communities, sustaining coastal habitats and mitigating coastal hazards.

NGS - National Geodetic Survey
The National Geodetic Survey (NGS) defines and manages a system of geographic reference points. This system, the National Spatial Reference System (NSRS), contributes to better public safety, economic prosperity, and environmental well-being.